

IN THE CLAIMS:

Please amend the claims as follows.

1. - 63. (Canceled)

64. (Currently Amended) An optical information processor, comprising:

a light source;

an objective lens for focusing light from the light source on an information recording medium;

an aperture element positioned between the objective lens and the light source for setting an aperture of the objective lens;

an actuator for controlling position of the objective lens minutely; and

photodetectors detecting light reflected from the information recording medium,

wherein the aperture of the objective lens is varied in recording and in reproduction, and

~~The optical information processor according to claim 62,~~

Wherein an aperture element formed of a polarization hologram comprising a $\frac{1}{4}$ wave plate and a diffraction grating made of a birefringent material varies the aperture of the objective lens in recording and in reproduction.

65. (Canceled)

66. (Currently Amended) An optical information processor, comprising:

a light source;
an objective lens for focusing light from the light source on an information recording
medium;
an aperture element positioned between the objective lens and the light source for setting
an aperture of the objective lens;
an actuator for controlling position of the objective lens minutely; and
photodetectors detecting light reflected from the information recording medium,
wherein the aperture of the objective lens is varied in recording and in reproduction, and
~~The optical information processor according to claim 62,~~

Wherein the aperture of the objective lens is formed of an aperture element comprising a polarization hologram portion and a thin film structure, the polarization hologram portion is formed by sandwiching a diffraction grating made of a birefringent material and a wave film having an optical thickness of $(N + \frac{1}{4}) \lambda_1$ (wherein N indicates an arbitrary natural number) between two glass substrates, the thin film structure is attached to either one of the glass substrates and varies an aperture area respectively for two lights with wavelengths λ_1 and λ_2 ($\lambda_1 < \lambda_2$) passing through the aperture element.

67. (Original) The optical information processor according to claim 66, wherein the other glass substrate, to which the thin film structure is not attached, of the two glass substrates (with a refractive index n_g) is provided with a structure having a plurality of concentric stepped portions in which difference in height between adjacent stepped portion is $\lambda_1 / (n_g - 1)$.

68. (Original) The optical information processor according to claim 66, wherein the wavelengths λ_1 and λ_2 of two kinds of lights passing through the aperture element satisfy a relationship of $(N_1 + \frac{1}{4}) \lambda_1 = N_2 \times \lambda_2$, wherein N_1 and N_2 represent arbitrary natural numbers.

69. (Currently Amended) An optical information processor, comprising:

a light source;

an objective lens for focusing light from the light source on an information recording medium;

an aperture element positioned between the objective lens and the light source for setting an aperture of the objective lens;

an actuator for controlling position of the objective lens minutely; and

photodetectors detecting light reflected from the information recording medium,

wherein the aperture of the objective lens is varied in recording and in reproduction, and

~~The optical information processor according to claim 62,~~

Wherein the aperture of the objective lens is formed of an aperture element comprising a polarization hologram portion and a thin film structure, the polarization hologram portion is formed by sandwiching a diffraction grating made of a birefringent material and a wave film having an optical thickness of $(N + \frac{1}{5}) \lambda_1$ (wherein N indicates an arbitrary natural number) between two glass substrates, the thin film structure is attached to either one of the glass

substrates and varies an aperture area respectively for two light with wavelengths λ_1 and λ_2 ($\lambda_1 < \lambda_2$) passing through the aperture element.

70. (Original) The optical information processor according to claim 69, wherein the other glass substrate, to which the thin film structure is not attached, of the two glass substrates (with a refractive index n_g) is provided with a structure having a plurality of concentric stepped portions in which difference in height between adjacent stepped portions is $\lambda_1 / (n_g - 1)$.

71. (Currently Amended) The optical information processor according to claim 69, wherein the wavelengths λ_1 and λ_2 of two kinds of lights passing through the aperture element satisfy a relationship of $(N_1 + 1/5) \lambda_1 \leq N_2 \times \lambda_2$, wherein N_1 and N_2 represent arbitrary natural numbers.

72. - 77. (Canceled)